

member comprises a flip chip.

REMARKS

In response to the Official Action mailed on August 6, 2001, the application has been amended. No new matter has been added. Reconsideration of the rejections of the claims is respectfully requested in view of the above amendments and the following remarks.

Claims 2 - 3 were rejected under 35 USC 112 as indefinite. According to the Official Action, the language "as at least a portion thereof" in claim 3 is nonidiomatic and renders it indefinite. This rejection is respectfully traversed. The Applicants are unable to find any indefiniteness in the language referred to in claim 3, nor can they determine why claim 2 was included in the rejection. Claim 3 states that "the organic acid contains a rosin as at least a portion thereof". This clearly means that at least a portion of the organic acid is a rosin. Strictly speaking, the words "as at least a portion thereof" are unneeded in US patent practice, but they were added to emphasize that a rosin can but need not be the entirety of the organic acid, and they do not seem to render the claim in any way indefinite. Furthermore, a search in the PTO database for the years 1996 - 2001 yielded 38181 patents using the words "at least a portion" in the claims, so this language appears to be widely accepted and therefor idiomatic. Accordingly, it is believed that claim 3 as filed is very clear in meaning, and that the

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rejection of this claim and claim 2 as indefinite is inappropriate.

Because the words "as at least a portion thereof" are unnecessary, claim 3 has been amended to omit these words and improve its readability, and this amendment presumably obviates the rejection under 35 USC 112. However, as the amendment in no way affects the scope of the claim, and as the claim as filed is believed to be definite, this amendment is in all respects directed to matters of style and is unrelated to issues of patentability.

Claims 1 - 2 and 4 - 16 were rejected under 35 USC 103(a) as unpatentable over Diamant '362 (US Patent No. 5,989,362). The same claims were also rejected under 35 USC 103(a) as unpatentable over Diamant '311 (US Patent No. 5,851,311). These rejections are respectfully traversed.

Since the disclosure of Diamant '362 contains the disclosure of Diamant '311 (of which it is a CIP), the two Diamant references will be discussed together. Amended claim 1 describes a soldering flux including an organic flux selected from rosins and caboxylic acid anhydrides. Amended claim 1 is supported by claim 2 as filed. Neither of the Diamant references discloses or suggests such a flux.

The two Diamant references disclose polymerizable flux compositions for encapsulating solder in situ. One composition includes a polymerizable monomer, a dibasic organic acid, a polyalcohol, and a curing agent. Another composition includes a polymerizable monomer, a liquid organic acid, and a curing agent.

Column 6, lines 43 - 58 and column 8, line 60 - column 9, line 17 of Diamant '362 and column 6, lines 26 - 41 of Diamant '311 describe various organic acids which can be employed, but there is no mention in either Diamant patent of using either a rosin or a carboxylic acid anhydride as an organic acid, as set forth in amended claim 1.

Accordingly, as neither of the Diamant references discloses or suggests all the components recited in amended claim 1, the references cannot render this claim obvious. Claim 1 and claims 2 - 16 which depend from it are thus allowable.

In the claim amendment, portions of claim 2 as filed were incorporated into claim 1. Therefore, claim 2 has been amended so as not to duplicate the scope of claim 1. Furthermore, claim 3 has been amended to change its dependency, since the rosin referred to in this claim is now first mentioned in claim 1.

Claims 1 - 16 were rejected under 35 USC 103(a) as unpatentable over Gomi (US Patent No. 5,215,601). This rejection is respectfully traversed.

Claim 1 describes a flux which exhibits a function of securing a component being soldered by a thermosetting resin contained in the flux. Gomi does not disclose or suggest such a flux. Page 6 of the Official Action states that column 4, lines 30 - 45 of Gomi discloses that its flux performs a securing function, but the portion of Gomi referred to in the Official Action merely recites various components of the flux. The purpose of the silicone resin employed in Gomi is to act as a deactivation agent, and the Applicants can not find any statement

or suggestion in Gomi that the flux is capable of performing any securing action.

Therefore, as Gomi does not disclose or suggest all the features recited in claim 1, it cannot render this claim obvious. Claim 1 and claims 2 - 16 which depend from it are thus allowable.

New claims 17 - 20 describe additional features of the present invention. These claims are allowable as depending from claims 13 or 14.

In light of the foregoing remarks, it is believed that the present application is in condition for allowance, and favorable consideration is respectfully requested.

Respectfully submitted,



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ATTACHMENT A



Marked-up version of the amended claims:

1. (Amended) A soldering flux comprising 0.1 - 70 mass percent of an organic acid selected from rosins and carboxylic acid anhydrides, 5 - 40 mass percent of a solvent, and a total of 10 - 95 mass percent of a thermosetting resin and a curing agent, wherein during soldering of a component, the flux exhibits a function of securing the component by the thermosetting resin.

2. (Amended) A soldering flux as described in claim 1 wherein the organic acid [is one or more classes selected from the group consisting of rosins, carboxylic acids and carboxylic acid anhydrides] contains a carboxylic acid anhydride.

3. (Amended) A soldering flux as described in claim [2] 1 wherein the organic acid contains a rosin [as at least a portion thereof].

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